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WHAT IS CLAIMED IS:

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-11 (canceled).

12. (New) A set of resonators that are integrated in a single crystal and intended to allow a temperature-stable time base to be produced, the set of resonators comprising at least first and second resonators designed to oscillate in modes of different type and with dimensions such that their frequency difference has at least a first thermal coefficient α equal or close to zero.

13. (New) The set of resonators as claimed in claim 12, wherein said single crystal is a single crystal silicon substrate.

14. (New) The set of resonators as claimed in claim 12, wherein said first and second resonators are oriented at an angle such that said frequency difference has a second thermal coefficient β equal or close to zero.

15. (New) The set of resonators as claimed in claim 13, wherein said first and second resonators are oriented at an angle such that said frequency difference has a second thermal coefficient β equal or close to zero.

16. (New) The set of resonators as claimed in claim 12, wherein said first resonator is designed to oscillate in an elongation mode.

17. (New) The set of resonators as claimed in claim 13, wherein said first resonator is designed to oscillate in an elongation mode.

18. (New) The set of resonators as claimed in claim 15, wherein said first resonator is designed to oscillate in an elongation mode.

19. (New) The set of resonators as claimed in claim 12, wherein said second resonator is designed to oscillate in a Lamé mode.

20. (New) The set of resonators as claimed in claim 15, wherein said second resonator is designed to oscillate in a Lamé mode.

21. (New) The set of resonators as claimed in claim 18, wherein said second resonator is designed to oscillate in a Lamé mode.

22. (New) The set of resonators as claimed in claim 12, wherein said first and second resonators each have a symmetrical structure formed by a central arm joining two rectangular plates, said resonators being able to be held in the middle part of said central arms.

23. (New) The set of resonators as claimed in claim 21, wherein said first and second resonators each have a symmetrical structure formed by a central arm joining two rectangular plates, said resonators being able to be held in the middle part of said central arms.

24. (New) The set of resonators as claimed in claim 12, wherein said resonators include piezoelectric excitation means.

25. (New) The set of resonators as claimed in claim 23, wherein said resonators include piezoelectric excitation means

26. (New) The set of resonators as claimed in claim 24, wherein said piezoelectric excitation means comprise an AlN layer deposited on said central arms and electrodes for contacting, on the one hand, said AlN layer and, on the other hand, said silicon substrate.

27. (New) The set of resonators as claimed in claim 25, wherein said piezoelectric excitation means comprise an AlN layer deposited on said central arms and electrodes for contacting, on the one hand, said AlN layer and, on the other hand, said silicon substrate.

28. (New) The set of resonators as claimed in claim 27, wherein said silicon substrate is doped and constitutes one of said electrodes for said piezoelectric excitation means.

29. (New) A temperature-compensated time base comprising a set of resonators as claimed in claim 12, means for exciting and sustaining their oscillations and means for generating a temperature-stable signal representative of the difference in oscillation frequencies of said resonators.

30. (New) A temperature-compensated time base comprising a set of resonators as claimed in claim 21, means for exciting and sustaining their oscillations and means for generating a temperature-stable signal representative of the difference in oscillation frequencies of said resonators.

31. (New) The time base as claimed in claim 29, wherein one of said resonators has a substantially higher oscillation frequency than the other, and said means for generating a temperature-stable signal further include a frequency divider circuit for reducing the highest frequency before said difference in the oscillation frequencies is taken.